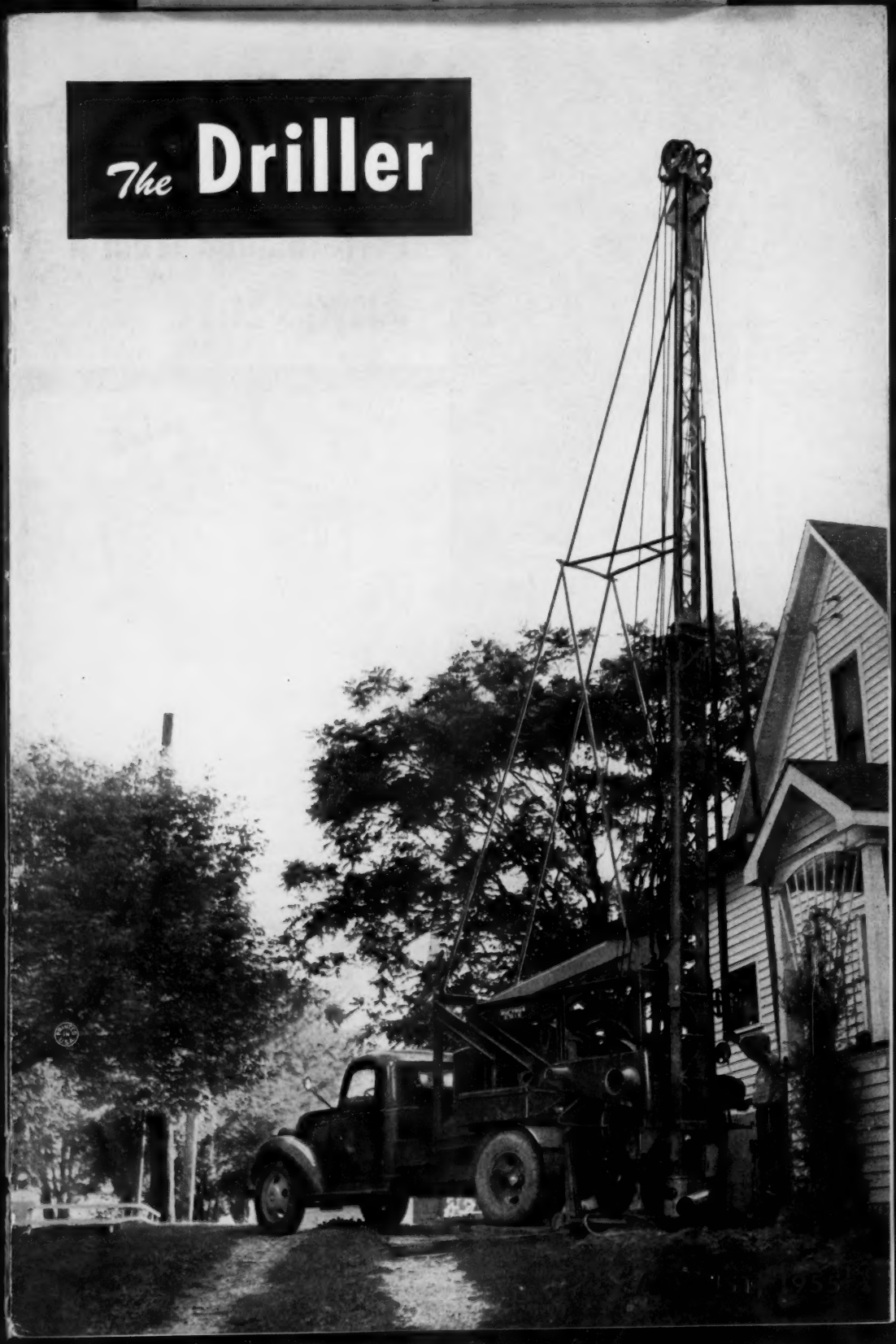
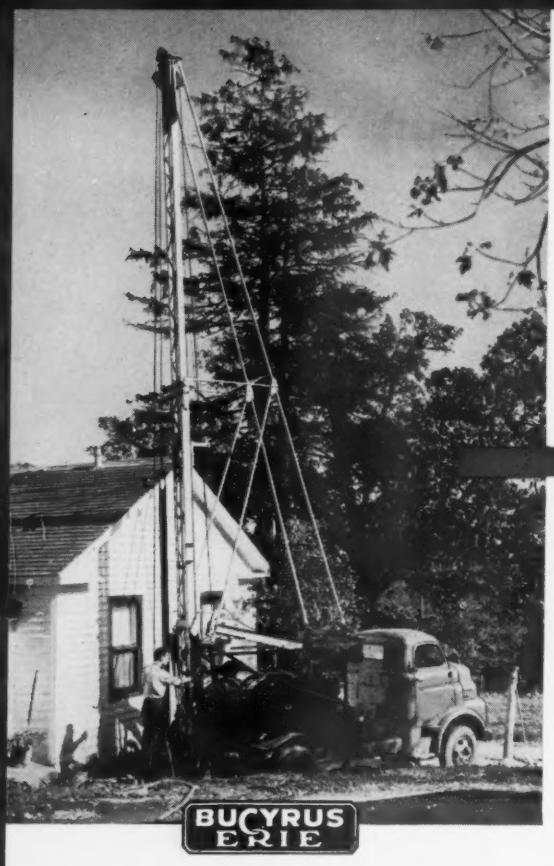
The Driller





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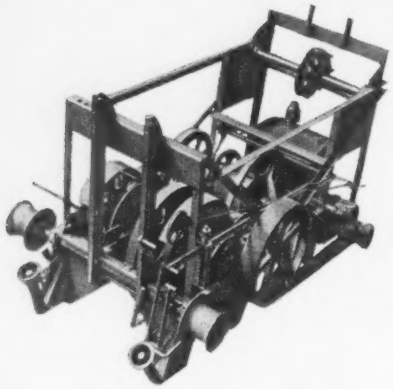

ONE big reason behind the dependability and long life of Bucyrus-Eries lies in the drill frame. Of all-welded construction and basic box-section design, it provides a solid foundation for the drilling machinery, locking it in accurate alignment.

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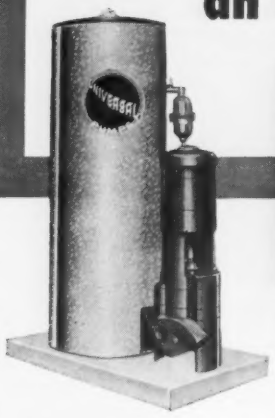

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The Driller

Vol. 29

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August 1955

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He saves the manufacturer the cost of heavy inventory maintenance in all parts of the country, the expense of an army of salesmen, a fleet of trains and trucks, and a staff of credit and collection experts. In a sense, your distributor represents a cooperative distribution facility that you share with all other firms in your area.

Next time you're tempted to get a direct quotation from the manufacturer, whether on a big or small item, figure out *all* the costs—not just the first cost—and you'll find you gain much more, yet in the long run pay no more, by utilizing the services of your distributor.

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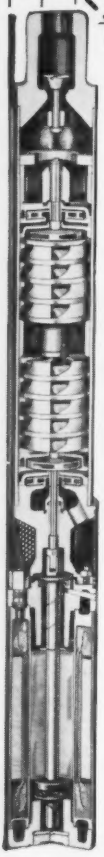

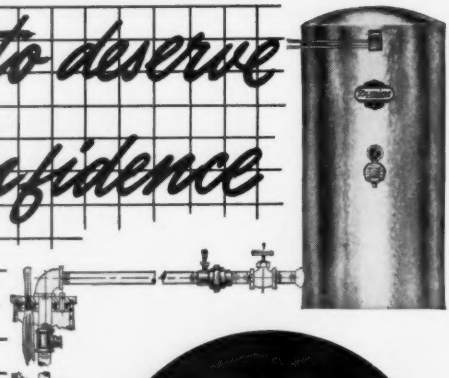

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Send for Bulletin 6700

Bulletin 6700 illustrates the construction features of the Deming Submersible Pump. Included are selection tables for wells from 40 to 400 feet to lowest water level with related pump capacities from 170 to 1500 gallons per hour.

DEMING *Pumps*

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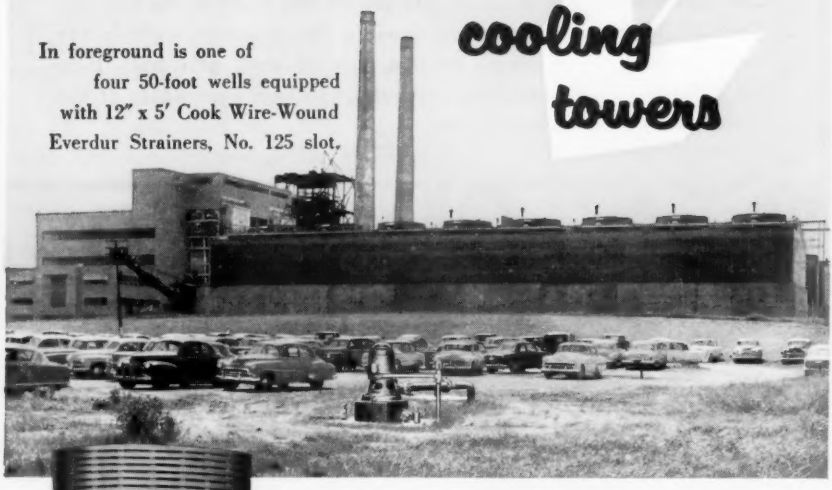
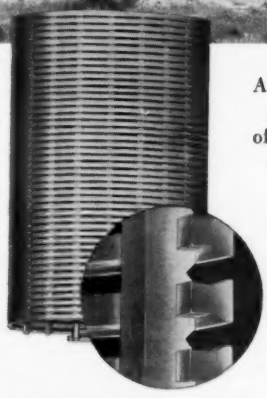
thirsty giants, these cooling towers

In foreground is one of four 50-foot wells equipped with 12" x 5' Cook Wire-Wound Everdur Strainers, No. 125 slot.





And *Cook Well Strainers* provide the dependable, unobstructed flow necessary to supply the water requirements of the Oklahoma Gas & Electric Company's cooling units at the Mustang Plant, southwest of Oklahoma City. Wells were constructed by Earl R. Kelley, Oklahoma City, and the Delta Engineering Co. supplied the well strainers. Power plant has two cooling towers which consume fresh well water at the rate of 1500 gpm.

One reason why Cook Well Strainers are chosen for important installations like this is that Cook Strainers have an exclusive V-shaped self-cleaning slot which eliminates clogging. Wire-wound or brass tube type are available in all slot sizes from .006 inches to .25 inches, fabricated from Red Brass, American Everdur Bronze, Armco Iron or Stainless Steel.

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Laramie Excels on Irrigation Wells

Carl Laramie, Kingsville (Ontario) driller, has been in the business since 1929. With the growing demand for irrigation wells in the area, Laramie concentrates on this type of well, gets more than his share of the business. He was recently elected president of the Ontario Water Well Association.

WITH only some 100 square miles of territory to cover in the lower Ontario (Canada) region between Lake St. Clair on the north and Lake Erie on the south, competition among 26 water well contractors is rather keen.

Contractor Carl Laramie of Kingsville, Ontario, keeps an accurate log of his work. He is shown beside a 22-W, checking figures on a 4-in. residential well in Cottam, Ontario.

Rich in farmland and fruit orchards, dotted with large greenhouses, this area is also growing industrially and the population is increasing rapidly. In addition to the growing demand for farm wells and rural and suburban residential wells, there's a particular need for irrigation wells in a typically flat and dry countryside.

Twenty contractors in the area still operate with home-made rigs, but the others have turned to more conventional manufactured drilling equipment. Modern tools are regarded by one member of the latter group as the shortest cut to fast drilling and success in the water well business. He is Carl Laramie of Kingsville, Ontario, who last May was elected

Following in his father's footsteps, Laramie has been drilling for 23 years in lower Ontario. Since 1946, he has put down at least 178 wells. This domestic well had both Laramie and his helper, Bruce Fox, busy.

president of the Ontario Water Well Association at its convention in Oakville. He had been a director of the organization for two of its three years of existence.

The 41-yr. old "neighbor" to most everybody within a 20-mi. radius of Kingsville has been drilling since he was 15. It was back in 1929 that young Laramie left Kingsville High School to help his father, Roy Laramie, in the drilling business. He's been at it for almost 23 years now, not counting three years in the Canadian army, and enjoys it more each year. His father retired in 1939 because of illness, but young Carl has kept things churning smoothly. Records show that he has secured more than his share of the drilling in the area.

Laramie handles a variety of well drilling, including wells for farm and industrial use, rural and suburban homes, air conditioning and irrigation. He has a license for all types of drilling, including gas and oil, but seldom drills for minerals and never for blast holes.

He is primarily an irrigation well driller. In a business that is just getting started in the lower province, he has already put down 30 wells in less than 3 years. Last year alone, his rig — a Bucyrus-Erie 22-W — accounted for 19 irrigation wells. One of his wells is irrigating 160 acres of peaches. Another is providing water for 75 acres of peaches.

Prior to the residential well he was putting down when *The Driller* visited his job, Laramie had hit his greatest flow. It was an 8-in. irrigation well east of Leamington. It tested 900 gpm at a 540-ft. depth. At 900 gpm, drawdown was only 50 feet. Sixty rods from this hole there were 37 dry holes drilled on 10 acres of land before Laramie came in.

On this, his deepest irrigation well, Laramie hit limestone at 66 feet. The water was gassy and sulphury but

Even though he drills domestic and other types of wells, Laramie gets more than his share of the expanding irrigation well market.

"better than good water for crops as most of the sprays and fertilizers contain some of these natural minerals and chemicals to aid crop growth."

Speaking of quantity, Laramie was quick to point out another sample.

"You take Grant Fox's peach orchards, some 70 acres of them. He was really tickled with the well we brought in. We put down an 8-in. hole to 140 feet. The well produced 400 gpm of good irrigation water."

Laramie confines his work to drilling, pump installation and servicing. He generally uses turbo-type deep well pumps.

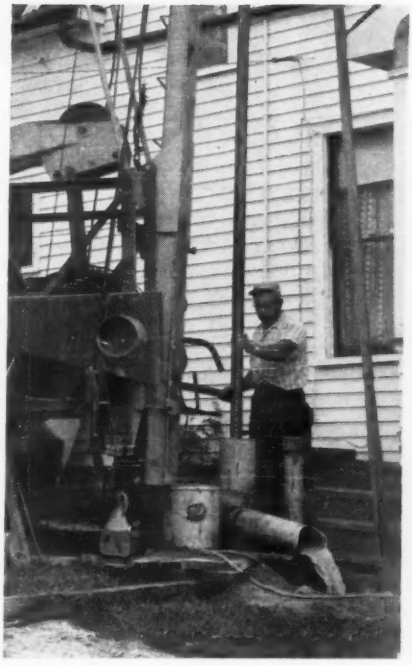
"About 99 percent of my business is water," explained Laramie. "I want very little part of the oil and gas business because I like to be independent, sort of free-wheeling. I can't see being tied down to company contracts and constant production pressures. I work when I want to and take off any time to go fishing for river cats or to be with my family."

Since 1946 when Laramie returned from 3½ years' army duty, he has put down a total of 178 wells. He purchased a new Bucyrus-Erie 21-W at that time, traded it in five years later for a used 24-L, then did the same when he purchased a new 22-W two years ago. Some 46 wells have been drilled with the 22-W.

Looking back a few years, Laramie recalled some of the jobs the 21-W handled. His fastest drilling job to date was a 4-in. well for a summer cottage near the beach.

The 21-W drilled to a depth of 135 feet, about 5 feet into the rock. He had it all sand-pumped, packed and ready for the pump the next morning. The well pumped 1,500

Bruce Fox (left) of Kingsville has been Laramie's helper for all of his 7-year drilling career. They have drilled 30 irrigation wells within the last three years.



The 41-yr. old contractor empties the bailer on completion of this 141-ft. domestic well for his brother, O. J. Laramie, a Cottam businessman. This well, tested at 10 gpm, was drilled in 30 hours by the Bucyrus-Erie 22-W.

gph. The total operation took 10 hours.

"My dad got about that far on a 2-in. well in 12 hours," grinned young Carl. "I had been trying for years to put one down in less time."

By contrast, the Kingsville contractor told of one operation that took two days to drill 6 inches after much blowing and "taxing of one's ability." Laramie finally got the pipe down and seated on rock and finished the well in 2 hours.

The 21-W also put down a 10-in. hole to 510 feet, averaging 40 feet daily. A 1,900-lb. tool string was used.

"It's too bad you weren't here with your camera when we put down a 4-in. dia. well right in George Schmidt's kitchen. We cut a hole in the ceiling and roof, worked the rig from outside, and dumped the bailer in pails on the kitchen floor. The 21-W was tilted up to permit the mast to lean over the roof. We drilled the existing well 4 feet deeper and struck a new vein. It not only supplied Schmidt's home with water, but now feeds his four big mushroom plants, 80-ft. long and 30-ft. wide."

About 90% of his wells are 8-in. dia., 5% are 10-in., the rest 6-in. Depths range anywhere from 140 feet to 540 feet with a yield of 100 gpm to 600 gpm. Domestic water wells normally range up to 225 feet in depth.

"We usually use about 1,900 to 2,200 lbs. of tools, depending on the use of jars. In the limestone, we often leave off the jars, but we've got to have 'em on in surface stuff."

Covering an area of about 24 x 50 miles — primarily within a 20-mi. radius of Kingsville — Laramie runs into some unusual problems. Quicksand is the biggest worry along with gravel. Occasionally, up to 65 feet of gravel are encountered which makes it particularly difficult to drive pipe. Clay and quicksand usually lie under the gravel.

"The use of drilling mud," Laramie advised, "saves 95 percent of the work in driving pipe! A lot of the boys are finding it helps in this sand."

Formations include everything from 4 to 100 feet of quarry lime.

Laramie dresses his own bits in his shop at home.

Laramie and Gordon Campbell, a

(Continued on page 38)

Shallow Well System Aids Water Supply

With a system of four shallow wells connected by 1,700 feet of plastic pipe, this Oklahoma town has taken a big step toward solving its water shortage problem. Each of the wells went down only 45 feet, yet the system pumped 90,000 gallons in 24 hours on its original test.

THIS year's impending drought has forced many municipalities, both large and small, to search for new water sources. Many areas of the Southwest are not fortunate enough to have subterranean water sources of sufficient size to support commercial exportation. Principal water supplies are obtained from reservoirs, but lack of sufficient runoff and the phenomenal increase of small farm ponds and soil conservation practices have reduced the amount of runoff into these reservoirs. This, together with the increased population and increased per capita consumption has produced a critical situation.

Most towns and cities have long range programs for increased reservoir storage; however, an immediate answer to this problem is confronting many small municipalities in this area.

Most of the small streams and rivers have a sand or gravel bed lying close to the surface that is quickly filled when the stream is flowing. These gravel and sand bed areas are generally not large nor of a very great depth. But in times of emergency they can yield substantial amounts of water Their general strata does not yield itself to a plan of several large wells, but generally a number of small, closely spaced wells are found to work best.

The city of Perry, Oklahoma, has a system of three reservoirs, all of which are nearing a new low. The city council decided after much consideration to try a system of small

To connect the wells, 300-ft. rolls of 1½-in. diameter plastic were used. The pipe was put down to a depth of 24 inches, which is below the frost line for the area.

Pre-fabricated and insulated structures like this housed the pumping units. The houses contain two heat lamps to prevent the contents from freezing. The indicator light on the cover portion makes inspection easy.

wells located along the creek beds behind the reservoirs. A number of test holes were drilled, and an initial four wells were contracted. These wells were drilled and reamed to 8 inches diameter. Six-inch standard well casing was set to an average depth of 45 feet. All of the original wells were located in a flood area, so that it was necessary to build up a mound of dirt at the well head for the pre-fabricated pump house. This small house, approximately 3-ft. square, is fully insulated and contains two heat lamps that are thermostatically operated to prevent freezing. The pumps are equipped with safety switches and indicator lights which are located on the outside of the house for easy visible inspection.

One of the larger problems was an economical gathering system for the well connections. Rolls of 1½-in. plastic pipe, 300 feet long, were chosen for the installation. This pipe was buried to an average depth of 24 inches, which was below the frost line for the area. The trenching problem in this instance was an obstacle, because of the restricted areas: residential lawns and road crossings. The contractor used a Ditch-Witch trencher for the job. Seventeen-hundred feet of gathering line were installed in one and one-half days, by two men.

The four-well installation yielded approximately 90,000 gallons per 24 hours on the original test. By regulating the flow, this type of well installation will serve its purpose in times of emergency.

Because of residential lawns and road crossings encountered, this lightweight yet efficient trencher was used to open ditch for the plastic pipe.

News of the month

From the State Associations

Idaho

The annual convention of the Idaho Drillers Association was held at Shore Lodge, McCall, June 27, 28, and 29, with approximately 100 persons attending.

Safety, insurance, cost accounting and improved drilling methods were among the several topics on the program.

The following officers were elected: Charles Cope, Idaho Falls, president; Clifford Hosack, Nampa, 1st vice president; Verl Andrews, Idaho Falls, 2nd vice president and W. B. Bowler, Boise, secretary.

Directors elected were Orval Harden, Boise; Francis Veach, Meridan; Jim Schoonover, Burley; Guy Cushman, Blackfoot; Emmett Smith, Jerome; Harry Bolton, Twin Falls; Blaine Boley, Murtaugh and Sterling Sigman, Pocatello.

There was no decision made regarding the 1956 convention site.

Mississippi

At its semi-annual meeting held in Jackson on June 10, the Mississippi Water Well Contractors' Association prepared a rather novel yet interesting program.

About 42 persons attended, and all took part in a guessing contest. With a roped off area containing materials used by drillers daily, the drillers and their wives were asked to guess length and diameter of pipe, length of chain, number of links in chain, length of cable, length of shaft, weight of bucket of water and number of peanuts in a jar.

Election of officers is on the agenda for the annual meeting to be held in September.

Ground Water Irrigates Desert Land in Idaho

The large perennial supply of ground water in the Snake River basalt, beneath the Snake River Plain of Idaho, is the source of water for the first major federal reclamation development in the United States based on ground water, according to Acting Secretary of the Interior Clarence Davis.

This project, the North Side Pumping Division of the Minidoka Project, contains 77,650 irrigable acres, of which about 64,000 acres will be irrigated exclusively with ground water.

The survey report contains a description and evaluation of the ground-water supply, describes federal and private ground-water developments, both present and planned, and estimates the effects of pumping on water levels in the basalt aquifer. Included are maps of the water-table contours, depth to water, and geology of the area.

During 1953 some 136 irrigation wells in and near the North Side Pumping Division supplied about 79,000 acre-feet of irrigation water, but pumping did not cause appreciable regional lowering of water levels in the vicinity. Local fluctuations caused by pumping also were small, their yearly range measuring about

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the motor

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one to five feet, the average being about two feet.

In the federal project the depth to water averages about 200 feet, the expected depth of wells about 300 feet, and the discharge rate from wells about 5.5 cubic fps (2,500 gpm).

The report, "Ground water in the North Side Pumping Division, Minidoka Project, Minidoka County, Idaho," was written by E. G. Crosthwaite and R. C. Scott, for publication as a Geological Survey circular. Pending publication, typewritten copies may be examined in offices of the Geological Survey at Room 1242-G, General Services Administration Bldg., Washington, D. C.; 204 Federal Bldg., Idaho Falls, Idaho; and 209 Fidelity Bldg., Boise, Idaho.

Chicot County, Arkansas, Ground Water Described

A report on the occurence, availability, quality, and development of ground water in Chicot County, Ark., shows that considerable additional development is feasible there. The report was prepared by the Geological Survey in co-operation with the Arkansas Geology and Conservation Commission.

Locations of irrigation wells, which tap the shallow Quaternary water-bearing formation, and of municipal and domestic wells, which tap the softer and deeper water of the Cockfield formation, are shown on a map. Two geologic sections show the character, depth, and correlation across the county of Quaternary and Tertiary aquifiers and those beds associated with them.

Eleven tables present records of 60 wells and chemical analyses of water from 48 wells, together with other information concerning local ground water and its development.

The illustrations and tables may be used with the text of the report to determine generally favorable locations for wells, the depth to which such wells must be drilled, and the probable quantity and quality of ground water that may be obtained in different parts of the area.

Chicot County lies on the flood plain of the Mississippi River in the southeast corner of Arkansas.

Irrigation Water

Irrigation wells are in sand and gravel beds at the base of deposits of Quaternary age, which occur generally at depths less than 150 feet below the surface of the ground. The water is hard and in many places contains considerable iron, but it is generally satisfactory for irrigation.

In the northern part of the county, the Cockfield formation, about 500 feet below the surface, yields to individual wells up to 500,000 gallons per day of water. This water, of the soft, sodium bicarbonate type, is used for municipal and domestic supplies. In the south-central and southern parts of the county, water from the Cockfield formation tends to be more highly mineralized and harder.

In the southernmost part it is probably too highly mineralized for most uses.

The report, "Ground-water resources of Chicot County, Ark.," was prepared by Frank E. Onellion and James H. Criner, Jr., of the Geological Survey. Pending publication by the Arkansas Geology and Conservation Commission, typewritten copies may be inspected at the Geological Survey, Room 208, 515 E. Second St., Little Rock, Ark., and Room

Greatest Name in Cable Tools

Acme

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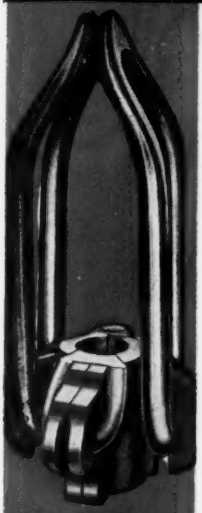

FIG. 301
Casing Elevator

For Safety Sake . . .

Links CAN NOT come loose or elevator open, while lowering or raising pipe. One solid piece (weldless) latch — so designed that no stress is carried by lower end of latch but is taken up immediately back of latch slots, at latch's strongest part.

Acme's Pipe Elevator Handles Easily, Heavy Loads . . .

Use Acme's (Fig. 301) FAIRS Type Casing Elevators for raising or lowering casing or pipe. Used in sets of two (casing spider and slips UNnecessary). One elevator supports pipe, while the other is used for handling joint above.

Made of stamina-tested cast steel. Bodies machined to fit pipe and "shoulder" evenly against collars. Uniform forge-welded removable links. Heavy enough for running long strings of pipe—with safety —yet light enough for easy handling.

Write for free copy 36-page (1955 edition) Catalog and tool-use Manual — designed and packed with especially valuable information for Water Well Drillers.

To-be-Sure —Always: Order Acme's

You get more of EVERYTHING needed in Acme Tools—100 are shown in new Catalog.

Acme Fishing Tool Co.

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ACME DRILLING & FISHING TOOLS Since 1900

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New B-E Distributor For Alabama Territory

The Perry Supply Co., Inc., Birmingham, Ala., now offers sales and service on Bucyrus-Erie's complete line of water well drills in Alabama, according to an announcement by Bucyrus-Erie Co., South Milwaukee, Wis.

This distributor will handle the 20-W, 22-W, 60-L, and new 1-W drills in addition to drilling and casing tools and parts for the machines. Serving industry for 42 years, the Perry organization has been carrying well casing and wire line, and is a specialist in pipe valves and fittings.

Complete equipment servicing facilities are maintained at the new distributor's plant at 823-37 First Ave., Birmingham. Chas. D. Perry and Charles Fell, Jr., will cover sales in the territory, which includes the state of Alabama.

Plastic Pipe Fittings Available From Reflin

A complete line of plastic pipe fittings is now available from Reflin Co., San Diego, Calif., for use with Reflin plastic pipe.

The fittings are made in standard sizes, or special sizes on request. According to the manufacturer, internal design of the corrosion resistant fittings allows smooth, unrestricted flow of liquids under a wide range of operating conditions.

Fittings are easy to assemble, and connections may be made positively without tools by using slip sleeve couplings or threaded sleeve adapters. Couplings or adapters are cemented in place, and form a bond as strong as the pipe itself.

For additional information, write Reflin Co., 5730 Kearny Villa Rd., San Diego, Calif.

Report Irrigation Plan Feasible For Boise Area

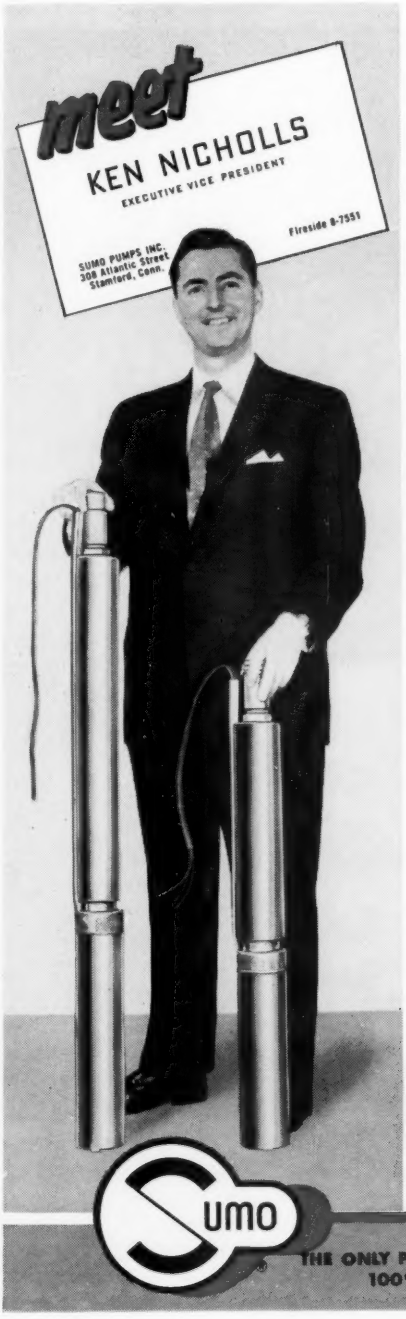
Pumping several hundred thousand acre-feet of ground water yearly in the Boise Valley is feasible in principal, but the plan would require substantial modification to make it practicable. This finding is in a Geological Survey report released by Secretary of the Interior Douglas McKay.

The Geological Survey report, by R. L. Nace, S. W. West, and R. W. Mower, "Feasibility of ground-water features of the Alternate Plan for the Mountain Home Project, Idaho," concerns the availability, accessibility, and chemical suitability of ground water for irrigation in the Boise Valley.

The Alternate Plan proposes to irrigate 123,000 acres, or 69% of the available irrigable area on the basalt plateau south of the Boise Valley. Water for the Long Tom Division project would be diverted from the South Fork of the Boise River below Anderson Ranch Dam, and for the Hillcrest Division from the Boise River at Lucky Peak Dam. Replacement water for Boise Valley irrigators would be pumped from wells in the Boise Valley and from surplus flow of the Snake River near Marsing.

In order to operate satisfactorily for a long time, the Geological Survey report says the plan must assure (1) continuous availability of an adequate water supply for the Mountain Home

(Continued on page 26)



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See your Sumo distributor or write us direct for free bulletins.

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THE ONLY PUMP MANUFACTURER TO CONCENTRATE 100% ON SUBMERSIBLES FOR WATER WELLS

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VERTICAL "PACKAGE" SYSTEMS

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Farm and Home Applications

Applications

Rapidayton

Save yourself work, worry and money when water requirements or construction loan specifications call for water systems with larger pressure tanks. Sell "ready-to-install" vertical jet "package" water systems with 42 or 52 gallon tanks—for deep or shallow wells—*right from the shipping carton*. No parts to find, no assembly to fuss with.

Sell at lowest possible prices, too! These trim-looking Rapidayton vertical systems carry *low* retail prices like the ones below—and *full* trade discounts.

Three basic models to sell, and there's nothing new to learn. You're already familiar with Rapidayton Champion quality and features. Sleek vertical tanks are designed and made by Rapidayton as perfect mates for the Champions you know.

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VERTICAL SHALLOW WELL CHAMPIONS

As low as
$146.25 retail
(f.o.b. factory)

For wells to 25 feet. Pump with ½ or ¾ H.P. capacitor motor on 42-gallon galvanized tank, air charger, pressure switch. Ready to install.

VERTICAL SIGNATURE CONVERTIBLE CHAMPIONS

As low as
$151.25 retail
(f.o.b. factory)

For deep wells to 80 feet or shallow wells. Pump has "Quick-Connect" flange and ½ H.P. capacitor motor. 42-gallon galvanized tank, pressure switch, air charger, ejector and foot valve. Ready to install.

VERTICAL "TWIN"* CONVERTIBLE CHAMPIONS

As low as
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TWO impellers! Pumps full capacity at 40 lbs. pressure from 0 to 140 feet! ½ or ¾ H.P. capacitor motor, 52-gallon tank, pressure switch, air charger, ejector and foot valve. Ready to install.

* Trade Mark

News . . .

(Continued from page 22)

Project, (2) continuous availability of an undiminished supply of good quality irrigation water for the Boise Valley, and (3) widespread, effective drainage benefits to Boise Valley land.

The principal necessary modifications in ground-water features of the plan would be in the proposals to pump 225,000 to 300,000 acre-feet of ground water a year, and to pump this water from wells at quarter-mile intervals along existing main canals. The Survey believes that the proposed pumping would not provide an undiminished water supply to Boise Valley lands, and pumping adjacent to canals would not provide either uniform or adequate drainage benefit to waterlogged lands.

Specifically, it cannot be assured at this time that the full amount of ground water actually required by a modified plan is available and economically accessible during the irrigation season. Moreover, some ground water in the Boise Valley is chemically undesirable for irrigation, and it is possible that operation of the Alternate Plan would aggravate the problems of water quality.

Unresolved major water problems at the heart of the Alternate Plan are in three principal categories, namely, (1) the amount of ground water that actually must be pumped to replace live surface water and return water, (2) the amount of ground water that is available and accessible year after year, and (3) the chemical suitability of the ground water and the water-management practices necessary to forestall an unfavorable salt balance.

Pending publication as a water-supply paper, typewritten copies of the Geological Survey report may be examined at the following places: 209 Fidelity Bldg., Boise; 429 Federal Bldg., Boise; Office of State Reclamation Engineer, State House, Boise; 204 Federal Bldg., Idaho Falls; 1001 NE Lloyd Blvd., Portland 14, Ore.; and 503 Federal Bldg., Salt Lake City 1, Utah.

Atomic Power for Converting Sea Water

The economic feasibility of converting sea water into drinking water may be only a few years away, it was predicted by Iron Age magazine, national metalworking weekly, in a special centennial issue, "100 Years of Metalworking". The magazine says that the widespread use of nuclear energy may bring about this and many other possibilities which could not have been imagined a decade ago.

Future developments in water treating will be indicative of the many revolutionary changes that can be expected with the widespread use of atomic power.

Water Levels Decline In New Mexico Region

Ground-water levels declined an average of about a foot during 1954 in the irrigated parts of the Tularosa-Alamogordo area in Otero County, N.M. This is based on measurements made in 27 observation wells by the Geological Survey in cooperation with the State Engineer of New Mexico.

About 25 wells had been drilled for irrigation by 1950. By February, 1952 approximately 60 irrigation wells had been drilled, and by Febru-

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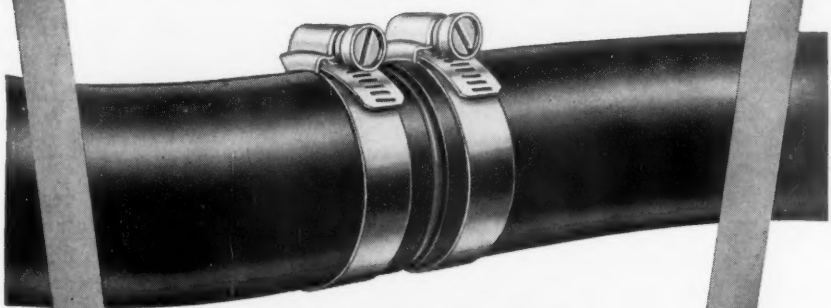
... the clamp *geared to* plastic pipe application



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No rivets . . . No welds = No rust spots!

IT'S POWERFUL Rugged construction and gear-drive action guarantee permanent, leak-proof grip.

IT'S COMPACT Screw and housing designed for extra clearance in casings and other close quarters.

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ary, 1955 about 90 wells had been drilled. Of the 90 wells, it is expected that 70 will be used in 1955.

In 1954 about 2,500 acres were irrigated from wells, and it is estimated that about 3,000 acres will be irrigated with ground water in 1955.

Measurements in 11 observation wells in the vicinity of Tularosa indicate an average decline of two feet in the most heavily pumped area. As irrigation continues and as additional irrigated land is developed, the pattern of decline may be expected to become more consistent, the rate of decline to be rather uniform, and the area of decline to expand somewhat.

A tabulation of the annual water level measurements made in February, 1955 and changes in water levels in 1954, and a map showing these changes and the locations of observation wells, are on file in the offices of the State Engineer at Santa Fe., Roswell, and Deming, N.M.; the County Agent, Alamogordo, N.M.; the Geological Survey Room 1242-G, General Services Administration Bldg., 18th and F Streets, NW., Washington D.C., and Room 279, Geology Bldg., University of New Mexico, Albuquerque.

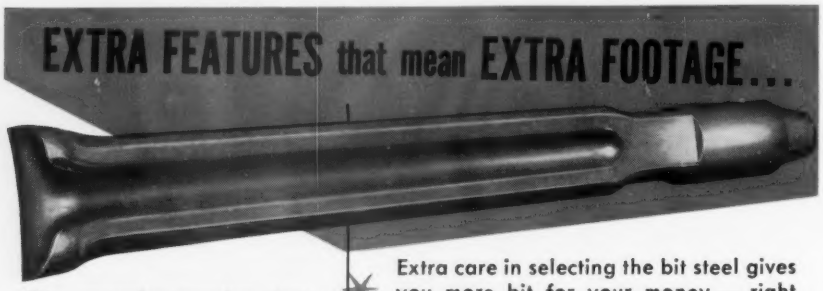
From the State Capitals

An impartial analysis of legislative and regulatory trends. Prepared by Bethune Jones.

New developments in the field of water supply and conservation as reported from state capitals and municipalities throughout the country, include the following:

California

Following the California legislature's failure to agree on a plan for



The superior service that drillers get from Bucyrus-Erie bits is due to the high quality steel used in them plus experienced design and the most modern manufacturing methods.

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Extra care in selecting the bit steel gives you more bit for your money — right from the start.

Extra care in shaping and tempering this choice steel develops all its strength and quality . . . results in greater durability and resistance to wear.

Extra deep water courses allow more room for cuttings to accumulate, resulting in less frequent bailing.

Extra long body sections give you more sharpenings per bit — longer bit life.

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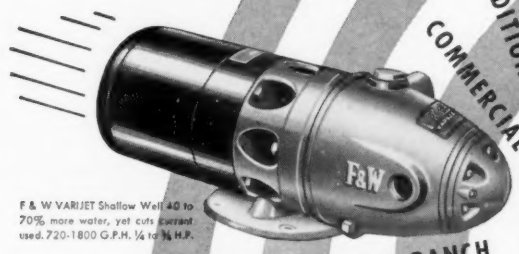

F & W VARIJET Shallow Well 40 to 70% more water, yet cuts current used. 720-1800 G.P.H. ¼ to ½ H.P.

Yes! You're right on target in every way that means profit from water systems with F & W! There's a *complete* line—with a pump for every capacity, pressure, and type of service for home or farm. F & W gives you exclusive advantages that help you sell . . . and F & W Systems *do* give trouble-free performance; that means satisfied customers. Take the F & W VARIJET for instance. It is absolutely unapproached by any other pump for shallow-well use. It gives 40 to 70% more water yet reduces motor load and power consumption. Do customers like it? You bet they do! And it's an *exclusive* F & W patent! So it is with other F & W Pumps. You enjoy comparable advantages that make F & W the proved, dependable, profit-line for you! So why not put F & W to work for you, too? Send today for our complete catalog.

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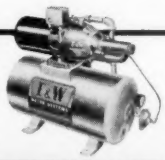
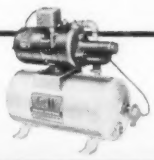


F & W Multi-Purpose Jet Easily changed to deep-well use. ½, ¾ & 1 H.P., 1 and 2 stages. Pressures to 100 lbs. Maximum capacity 950 G.P.H.



F & W "Economy" Multi-Purpose Jet. ½ H.P. 350 G.P.H. Easily changed to deep well operation.

F & W Deep Well Multi-Stage Jet 1 to 4-Stage, ½ to 5 H.P. (500-4000 G.P.H.). Control Valve, Speedi-change Seal, Air Injector.

F&W means Flowing Water by Flint & Walling

establishment of a new state water department, Governor G. J. Knight said he was pondering ways to work out a state water program with existing agencies.

"There are certain agencies over which I have executive power as governor and it might turn out I could get a clear chain of command on water matters without the statutory creation of a new department."

Pointing out that water tables are dropping in a number of California areas, Knight emphasized that the solution of the state's problems in that respect cannot be postponed indefinitely. "We certainly can't wait until all we're pumping is salt water," he warned.

Florida

Bills approved by the Florida legislature included a measure appropriating $48,000 for a study of water resources of the state, including water pollution problems.

The bill called for a commission composed of two state senators, two representatives and three persons named by the governor. The seven-member commission's study will be reported to the next legislature's session.

Georgia

A proposal for establishment of a basic water policy for Georgia, with the state assuming responsibility for water use and development regulations, was submitted to the State Water Laws Revision Commission, an interim study group, by the Georgia Water Use and Conservation Committee.

Recommendations by the water-use-conservation group, which were

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When you are called upon to recommend a water system, make it Fairbanks-Morse!

You will be assuring your customer of many years of trouble-free service—backed by Fairbanks-Morse guarantee against defects in materials and workmanship.

Fairbanks-Morse complete line of water systems enables you to recommend the pump best suited for every installation.

For complete information about Fairbanks-Morse shallow well and deep well pumps, write Fairbanks, Morse & Co., Chicago 5, Illinois.

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WATER SYSTEMS • GENERATING SETS • MOWERS • MAGNETOS • PUMPS • MOTORS • SCALES • DIESEL LOCOMOTIVES & ENGINES

On your jobs...use

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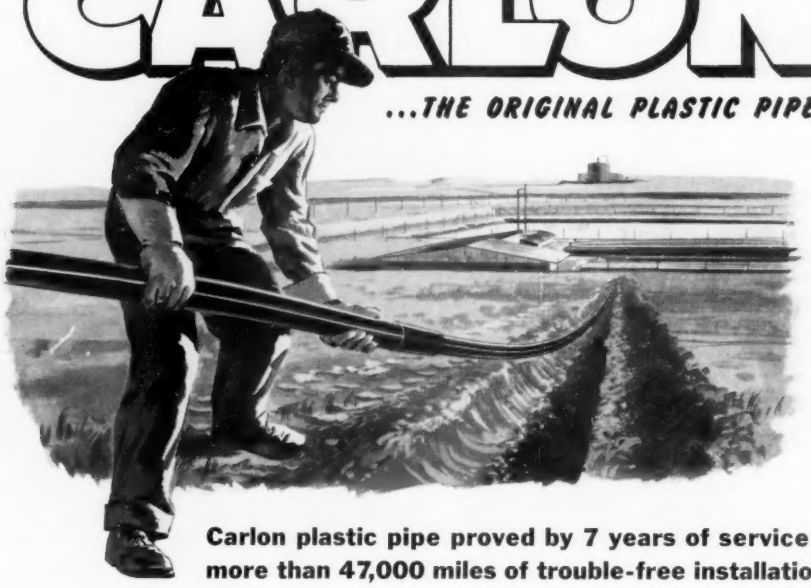
...THE ORIGINAL PLASTIC PIPE



Carlon plastic pipe proved by 7 years of service in more than 47,000 miles of trouble-free installations

CARLON—
THE PIPE WITH THE STRIPE

can always be identified . . . even after years of severe underground service. Every foot is guaranteed forever against rot, rust, and electrolytic corrosion. This guarantee is backed by the reputation of Carlon . . . the oldest manufacturer of plastic pipe.

Carlon invented plastic pipe and has made far more of it than anyone else. No one can match Carlon experience or facilities.

Carlon has learned how to make plastic pipe stronger, better, longer-lasting. Carlon maintains the finest research facilities in the industry to keep its pipe always better and more dependable.

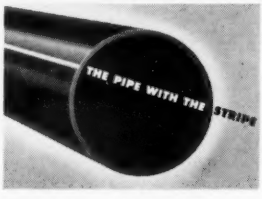
You can get Carlon pipe made specially for different applications such as water, gas, oil, sewage, drainage, chemicals, acids. Each type is color-coded by the famous Carlon stripe, the best accepted trade mark in the Plastic Pipe industry.

Save 50% on installation

Carlon pipe costs at least 10% less than galvanized . . . *far* less than copper. One man can couple 2400 feet of Carlon "EF" in an hour. Because Carlon pipe is more flexible, you can bend it around corners to eliminate elbows. Its smoother walls reduce pressure drop . . . permit use of smaller sizes.

Ask your jobber for more information

Your jobber has the full story on Carlon. He'll give you all the facts and all the help you need. He'll show you why it's better . . . how it saves you money on every job.



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taken under consideration by the state revision commission, included:

1 — That new water laws protect existing vested rights to the beneficial use of water.

2 — That the administrative unit be empowered to explore the needs for compacts and agreements concerning Georgia's share of waters and watercourses, lakes and groundwater formations.

This would be where part of such waters are in territorial limits of neighboring states. Recommendations would be made to the state legislature.

3 — That the administrative unit start as soon as practicable preparing inventories of present and potential use of water resources in co-operation with public and private users and others.

4 — That initial legislative proposals establish an objective for maximum beneficial uses of waters, recognizing that encouragement of orderly development, conservation, wise use and protection of land and water resources serves the public interest.

Michigan

A new Michigan law allows two or more municipalities to incorporate an authority for the financing and operation of water supply and sewage disposal systems.

South Dakota

Members of a new South Dakota Water Resources Commission, which will administer new state water laws which went into effect July 1, were appointed by the governor.

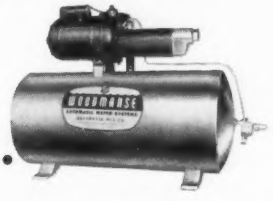
They were Carl Cronin, Gettysburg; Walt Taylor, Rapid City; James Biggar, Brookings; Arthur E. Munck, Pierre; Hunt Ferris, Vermillion; Lau-

If you want a BIG LIFT... install MODERN-WOODMANSE CONVERTIBLE JET PUMPS

a LIFT on the job... a LIFT for PROFITS

Rely on dependable *Modern-Woodmanse* jet pumps for big profits from satisfied customers. They lift more water faster, install easier, and quickly convert to shallow or deep well. Like all better-built *Modern-Woodmanse* products, they're designed right and priced right . . . to sell well and stay sold. You'll like 'em, just as you'll like the bigger, better, complete M-W line . . . the line that solves inventory worries, cuts costs and kick-backs, and puts you in a sounder position to do more business tomorrow. Send for information now!

AQUA-MASTER. For shallow and deep wells using same pump, tank and motor. Lifts zero to 100 feet. No moving parts below ground.



AQUA-QUEEN. A completely convertible deep-shallow well pump using only one jet. No special attachments needed. Many models . . . all at low cost.

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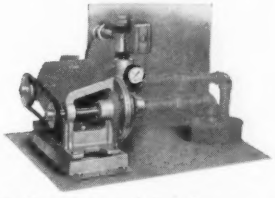
Modern and *Woodmanse* . . . now merged to bring you the combined resources of two great plants. Watch the M-W line. It's going places!



THE BOP. Never before a belted ejector pump so versatile, so economical. Uses any size 1725 rpm motor. Just change pulley. Operates at any level—zero to 100 feet.

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Write or wire *now* for startling details on AGGRESSIVE SALES PROGRAM.

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When it comes to providing water for livestock and home needs, nothing does a better job than a JENSEN JACK. That's because they are better engineered. Look at these advantages JENSEN JACKS offer you and your customers. Low initial cost . . . low operating cost . . . easy counterbalancing and quick installation.

END STUFFING BOX TROUBLES

Jensen's Self-Adjusting Stuffing Box lasts longer . . . easier to repack . . . stops loss of water.

JENSEN JACKS

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1016 Fourteenth Street
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ren H. Davis, Belle Fourche, and Kenneth Kellar, Lead. The appointments are subject to state senate confirmation at the 1957 legislative session.

Under the new laws, the commission has full control of all waters, ground and surface, and will allocate water on the basis of beneficial use. The law sets up a priority for water, giving domestic use first preference. Livestock watering also is among the top priorities.

Wyoming

A subcommittee of the Wyoming State Legislative Research Committee is studying the problem of legislation controlling the use of groundwater and will report its findings and recommendations to the 1957 session of the legislature.

While nearly all interested parties agree the state needs a new groundwater law, there is little harmony over how to proceed.

Some argue that bills unsuccessfully introduced in the 1955 legislature would deal adequately with the problem, while others want to proceed more slowly.

While some favor a groundwater law only if it is submitted for the approval of the people in the state's water districts separately, others feel it should be made binding on the state as a whole.

About all Wyoming now has in the way of groundwater regulation is a law requiring that a person must register his well after it has been drilled.

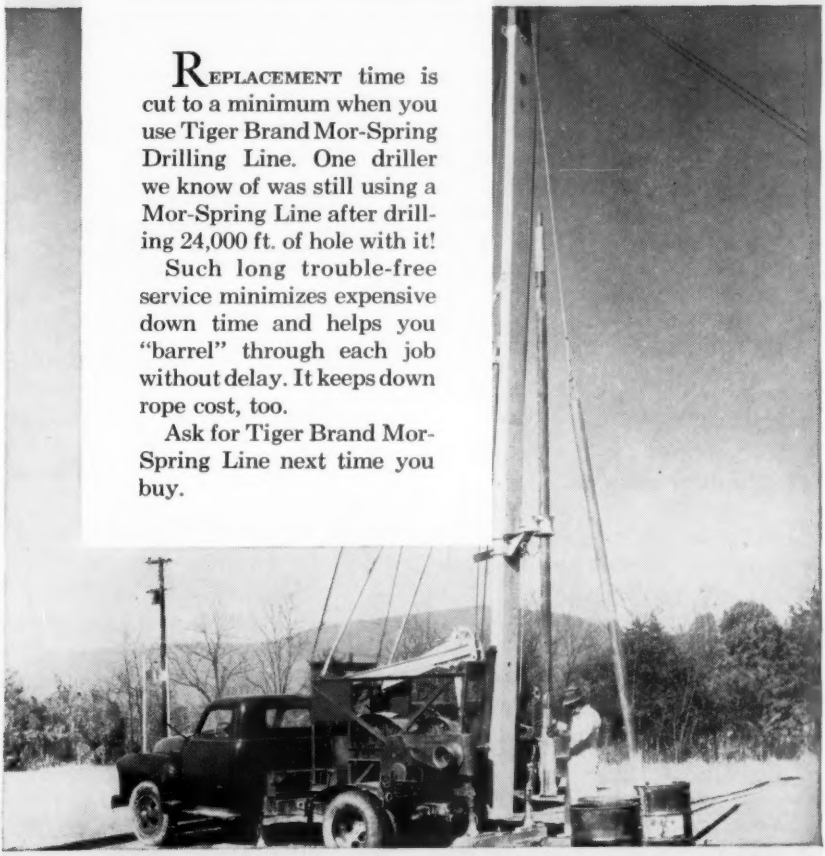
A bill rejected by the 1955 legislature would have required all persons putting in wells for irrigation purposes to make application to the state engineer for a permit.

Tiger Brand Line *keeps making hole* and that saves you money

REPLACEMENT time is cut to a minimum when you use Tiger Brand Mor-Spring Drilling Line. One driller we know of was still using a Mor-Spring Line after drilling 24,000 ft. of hole with it!

Such long trouble-free service minimizes expensive down time and helps you "barrel" through each job without delay. It keeps down rope cost, too.

Ask for Tiger Brand Mor-Spring Line next time you buy.



USS AMERICAN TIGER BRAND MOR-SPRING DRILLING LINES

USS

AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL CORPORATION
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UNITED STATES STEEL EXPORT COMPANY, NEW YORK

UNITED STATES STEEL

BITS *from the wit sharpener*

Husband to wife: "What do you say we take this money we've been saving toward a new car and blow it on a movie?"

"Those new people across the road seem very devoted," said Mrs. Jones to the newspaper which hid her husband.

A rustle of the sheet was all the reply she got, but she was used to that.

"Every time he goes out he kisses her, and goes on throwing kisses all down the road. Edward, why don't you do that?"

"Me!" snorted the man behind the news. "I don't know her."

Frank and George stood laughing on the street corner, when Willie came along and asked what was so funny.

"Well," Frank said, "I went into that bar and ordered a drink. When I finished and the bartender asked for my money, I told him I had already paid him, and the dope believed me."

"Yeah," George said "Frank told me, and I went in and did the same thing."

Willie immediately walked in, sat down, and asked for a highball. When the bartender brought the order and said, "You know; in the last twenty minutes, two guys have come in here and —"

"Cut the gab," Willie interrupted, "and give me my change."

Freshman (writing home to his mother): "Ma, college is fine. The only thing I miss is that little thing under the bed."

Mother (writing back): "That's not unusual, son. You always missed it when you were at home, too."

A medium, giving a seance, was bringing back people from the other world. A boy was among those present.

"I want to talk to Grandma," he said.

"Quiet! Quiet!" hushed the medium.

"But I want to talk to Grandma! Holy cow . . . "

"Very well, little boy. Here's your Grandma."

"Hello, Grandma, what you doing up there? You ain't dead yet."

A seasick couple lay stretched out in deck chairs somewhere between life and death. Meanwhile, their young son became more rowdy by the minute. Finally, the mother mustered voice enough to say: "John, I wish you would speak to Willie."

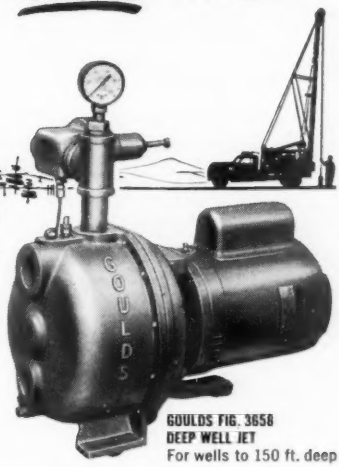
The father, unable to lift his head, said feebly, "Hello, Willie."

"The greatest man who ever lived was Huggins — broadminded, tolerant, generous, temperate, brilliant — yet he died with all his talents unsuspected."

"And how did you manage to find out so much about him?"

"I married his widow."

Make it a GOULDS ...and you'll make more!



GOULDS FIG. 3658
DEEP WELL JET
For wells to 150 ft. deep

Here's Another NEW Business-Builder!

Goulds Fig. 3371 Multi-Stage Jet Pump

It's just the pump you've been looking for — built especially to deliver higher pressures from those extra deep wells (up to 200 ft.). 2-Stage and 3-Stage models . . . capacities to 1175 gals. per hr. . . . automatic pressure control for guaranteed maximum capacity at all times! See it NOW...

Every time you top off your well job with a Goulds Water System — it means another satisfied customer. *Satisfied* customers tell *others*—and that builds new business for you.

Goulds—world's largest pump maker—gives you every size, type and capacity of pump to give satisfaction — and make money — on every job. Take this Goulds Fig. 3658 Deep Well Jet — it's low in cost . . . tops in performance . . . easy to install . . . sure to be your choice for deep well jobs down to 150 ft.

Goulds Fig. 3658 carries a low price for volume sales. Built in two sizes ½ and ¾ H.P. with capacities to 670 gallons per hour for wells to 150 ft. in depth. Easily installed for twin pipe or single pipe systems . . . delivers capacities to 670 gallons per hour.

Install a Goulds Water System on every job — it builds business!

See your distributor or write:
GOULDS PUMPS INC.
Seneca Falls, N. Y.

GOULDS WATER SYSTEMS
Since 1848
FOR EVERY FARM AND HOME NEED

Laramie . . .

(Continued from page 15)

Kingsville neighbor, often swap their 22-W's. Laramie's rig is usually used for 8-in. work while Campbell generally runs down 4 to 6-in. holes. Campbell services 18 gas wells with his rig in addition to water well contracting.

On the occasion of *The Driller's* visit, Laramie was using Campbell's 22-W to complete a 4-in. residential well for his brother, O. J. Laramie, in Cottam, Ontario, which is about 12 miles north of Kingsville.

The well was at the 141-ft. depth in about 3 feet of limestone. After about 130 feet of clay, the rig encountered some sand and stones before hitting the limestone. The water was 30 feet from the surface.

Following this operation, Laramie moved in his own rig on a 6-in. well for a summer home.

He expects to go down about 80 feet, where he believes an adequate supply will be found.

Works Year-around

Laramie works on a year-around basis. He operates his 22-W along with his helper, Bruce Fox, of Kingsville. Fox began his drilling career seven years ago with Laramie.

"I've liked Bruce from the beginning," Laramie commented. "I trained him my way, and he's always done things as I wanted him to.

"I pay him a good hourly wage for this area. We work 5 to 5½ days or approximately 40 to 50 hours a week. He also gets a bonus for footage when I'm not around. Of course, when I am on the job, Fox gets paid full time and no bonus.

"Business as a whole has shown an improvement here this year," Laramie continued. "And the future looks bright as far as water wells are concerned.

"The area is being populated so fast that we can't keep up with it.

Rich Crop Lands

"We get almost all of our water from wells, although some of the towns pull water from surface stuff . . . out of Lake Erie or the Detroit River. But we're just getting started in irrigation. We've always had rich crop land.

"The sandy soil is wonderful for celery, potatoes, lettuce, cucumbers, peaches, apples and string beans. Cabbage and cauliflower are also produced in great quantity.

"Our larger farms are being divided into smaller units, however, and more irrigation is necessary.

"If one farmer irrigates, others have to keep up or take a beating on the market.

"As a result our usually bumper crops are even more bumper . . . if that's possible," Laramie laughed.

Many Greenhouses

He added that farms in the area vary from 5 to 100 acres, and each is usually served by one well. There are numerous greenhouses throughout the territory, too, and their owners depend on drilled wells for irrigation.

Some farmers have as much as four acres of "greens under glass."

Laramie also described a "freak" well which flowed at 600 gpm at the surface, about 35 feet above and 1500 feet in from the Detroit River.

"It was an air-conditioning well," Laramie said. "The well itself was at the 325-ft. level of an estimated

Pat. Pending

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for medium depth, small diameter holes

SIZES: 2½" to 10" for boring depth up to 300 feet

A revolutionary Fishtail Screw Bit for use with any type of continuous Helix type auger.

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- Bores in any kind of soil, hardpan, sandstone, shale or permafrost.
- Bores clean straight holes of specified diameter.
- Minimizes wear and tear on your earth boring machine.
- Requires less power to operate.

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ENGINEERING COMPANY

Dept. 17

Santa Clara, Calif.

1,000-ft. completion. We had to put a rubber stopper or cork in the pipe in order to put on the valve. Only 200 feet from this hole, there was a 700-ft. well which pumped 200 gpm."

That's the way it goes for Carl Laramie and other contractors in a busy territory. A deep well on one contract, perhaps a shallow one on the next: these and occasional "freak" holes are all a part of the business.

Married and the father of three sons, ranging in age from 4 to 13, Laramie isn't pushing any of the boys to follow in his footsteps. He rather discourages such leanings for the most part.

But it seems that his 9-yr. old takes a liking to "doing things as dad does," and it does bring a bit of a proud smile to the lips of Laramie.

BARGAIN *counter*

All advertising in this section is payable in advance. Enclose your check or money order with copy. Rate: 60c per line. Minimum charge $2.40. No discounts; no commissions. Count your own copy to avoid delay. The average line contains 28 characters (20 characters if all capital letters are used). Count spaces and punctuation as one character each. Allow 10 characters for box number if blind advertisement is desired. Closing date — 10th of preceding month. Example — January issue closes December 10th. Be sure to address separate inquires to each advertiser by using the correct box numbers. Mail Box inquires care of THE DRILLER, South Milwaukee, Wis.

DRILLS FOR SALE

22-W Bucyrus-Erie 1949 model, mounted on GMC truck with 6" tools and line; reasonably priced. Westerly Artesian Well Co., Post Rd., Westerly, R.I.

Armstrong 33-W, mounted on '49 Dodge truck with two speed axle; power derrick, complete string of tools for 6" work; machine and truck completely overhauled and painted. Humphrey W. Yaukey, McConnellsburg, Pa., Phone: Hudson 5-2646.

1954 #42 Cyclone drill mounted on 1953 2-ton Chev., used very little. Clarence Bue, 1729 Virginia Ct., Owensboro, Ky., Phone: 3-8469.

22-W bought new Sept. 1953, mounted on GMC 6x6, equipped with calf reel, spooling device, tool guide and blower; will sell with or without truck, with or without tools. R. T. Davidson, LaFollette, Tenn., Phone: 998.

#42 Cyclone on a 1950 Studebaker 2 ton truck, rig and truck A-1, $2950. D. W. Harader, R.R. 2, Arkansas City, Kansas.

DRILLS FOR SALE

Keystone #35 semi-steel telescoping mast, power hoist, truck mounted, 6 inch tools, 500 feet ¾" and 500 feet ⅜" drill line, price: $1500. Box 607

Loomis machine steel mash, mounted on 1935 Ford truck; 500' of new ⅝" drilling line, and 400' of ¾" sand line, complete string of tools 5", 6", and 8" bits; price is $1500. Russell E. Snider, Box 11, Gratiot, Ohio, Phone: ST-72461.

24-W Bucyrus Armstrong water or oil drilling machine, cap 6" hole, 1500' with 1400 lb. tools, 65 hp Buda eng. full trailer mounted; calf reel and spooling device; reas. price; must sell. John M. Heeter, 312 Indiana Trust Bldg., Indianapolis, Ind.

Idecos 16 and 6 on Int. and Ford trucks both rigs in good shape, complete and ready to go with 5, 6, 7 and 12" bits; never operated only by owner; original cables.

Small rotary on Int. truck, 4 to 12" bits; 3x4½ double cyl. double acting Gardner Denver pump; mud pump hoses and stems, cable pull down and earth augers, not able to operate, reasonable. E. R. Terrel, 520 S. Main St., Scottsburg, Indiana.

1953 model 50 Keystone rig complete with tools, 6 and 8 in. bits, in first class shape $5500.

A home made rig built on the style of 21-W Bucyrus; complete with truck and tools $600. Pat Eatherly, Carthage, Tennessee, Phone: 395.

20-W well drill #112093 mounted on a 1951 Ford truck with two-speed axle; complete with 2" jetting tools, pump, string of 4" solid tools and lines; machine and truck in A-1 condition; one price: $5000 complete. Lake County Well Drilling Company, 2627 Highway Ave., Highland, Indiana.

DRILLS FOR SALE

#42 Cyclone mounted on C. O. E. Ford truck, 36' derrick with rubber shock absorber, Waukesha engine, 500' new ⅝" line, complete set of 4 and 5" tools. $2500. Karl Rickett, R.F.D. #6, Wooster, Ohio.

Late model 22-W well drill excellent condition mounted on a Ford truck in very good condition; priced to sell. H. E. Shirley, Stephenson, Va., Phone: Winchester 8375.

1953 model #42 Cyclone drill machine mounted on 1946 Ford truck, six and eight inch drilling tools, good wire lines. James C. Walters, Lincoln City, Ind., Phone: Dale Westmore 7-4715.

#42 Cyclone mounted on '47 Studebaker truck with good motor and two speed rear axle with fair tires; machine has tool guide, cathead, spooling device, slack line holder, gear reduction on bull reel for pulling casing, etc casing reel, starter and generator; 600' new ⅝" drill line, 600' ⅜" new sand line; cat walks and tool box built on; has been used about six weeks; drilled ten 4" wells; must sell because too big for our work; price: $5800. Douglas Holzem, 1975 Prairie Ave., Beloit, Wis., Phone: 2-3922.

All steel machine on '39 Chev. truck; 36' telescoping power mast; 5" and 6" bits; 2 bailers; blower, forge, some casing included, 350' each cable; possession any time; $1000 with tools. Jasper Newlin, Box 9, Dundas, Illinois.

Up to date rebuilt Sparta well driller in A-1 condition, 35' steel derrick mounted on 1½ ton Ford truck; complete with all bars, jars, bits, cable and all necessary tools for 4, 6, 8, 10"; reason for selling ill health; priced at $2250. Ernest Bourassa, 208 Brazeau Avenue, Oconto, Wisconsin.

DRILLS FOR SALE

#72 Speed Star purchased new in 1954; mounted on a very good 1948 five ton Brockway truck equipped with mud tires, air brakes and two speed rear axle; drill equipped with regular 50′ telescoping mast, casing reel and six cylinder Continental engine with electric starting equipment; drilling tools and lines also available if desired. M. W. Ives and Son, Mt. Ivy, Pomona, New York, Phone: Haverstraw 9-5268.

#271 Star mounted on 1940 GMC truck with two speed axle and rebuilt motor, machine and power unit recently overhauled. Ackerson Well Drilling, Inc., MacDonald Drive, Preakness, Paterson 2, N. J., Mountain View 8-2368.

Bucyrus-Erie 21-W with tools in A-1 condition, mounted on '47 3 ton Mercury, price: $3000. Frank Hunter, R.R. 2, S. Woodslee, Ont., Canada, Phone: Pleasant Park Line 17-R 15.

#44 Cyclone equipped with Continental R226, 6 cylinder engine, 6 V-belt drive, twin disc clutches, mounted on 1½ ton 1946 Chevrolet; rig completely rebuilt Dec. 1954, $3000. J. N. Hendon Drilling Co., 721-24th Ave. E., Tuscaloosa, Alabama, Phone: 24881.

Rig like Bucyrus-Erie 22-W mounted on Chev. truck; with tools for 8″, 7″ anl 5″ holes; also 2000′ of ¾″ drill line. $2300. R. Hennig, Princeton, Ind., Phone: 1307B.

1948 22-W drill with casing reel, rubber cushioned sheaves, blower, tool guide, 600′ new drill cable, 400′ new sand line, mounted on Federal truck. Frank Panciera, Old Mistic Street, Old Mistic, Conn.

1946 21-W drill mounted on 1941 International truck with catheads; 500′ new ⅝″ cable; 500′ ⅜″ cable; $2000 cash f.o.b. Two Harbors. Austin Wittlief, R.F.D. Two Harbors, Minn.

DRILLS FOR SALE

1954 Cyclone #40 mounted on 1940 Ford cab over engine long wheel base. Amel F. Green, 214 South 4th Street, Upper Sandusky, Ohio, Phone: 293-W.

1950 Cyclone #40 mounted on 1939 International #C30 long wheel base truck. C. H. Bond, 2357 Murry Drive, Toledo, Ohio, Phone: P. H. Klondke 1169.

22-W Bucyrus-Erie 1949 model completely equipped mounted on 1949 Dodge with good 6″ tools and lines; excellent condition throughout. John Cory, Jr., 179 Wapping Rd., Newport, R.I.

Sullivan 200 diesel powered $12,500, Mayhew 1000 $5250, Failing 750 $5000, Failing 1500, Mayhew 2000, others. Fred Butler, Box 481, Pueblo, Colo.

#50 1949 Keystone well drill, winch truck; tools for drilling 6 to 18″ holes; fishing tools; list of tools and price upon request. Leonard Findlay, R. R. 2, Blackfoot, Idaho, Phone: 4032.

21-W drill with tool guide and blower mounted on 1946 Chev. equipped with tools and line for 6″ hole; good operating condition, machine and engine recently overhauled. W. H. Fischer, Pembroke, N. H., Phone: Hunter 5-3743.

Two late model, hvy. duty well drill rigs mounted on hvy. duty trucks; tools. Henry Merry, Duxbury, Mass. Phone: Kings. 8733.

71 Speed Star mounted on 4 ton Mack truck having good tires; drill equipped with spring type shock absorber, 40′ telescoping mast and rebuilt 4 cylinder Continental engine with starting equipment. Peerless Well Drilling Co., Box 139, Saddle River, New Jersey, Phone: Davis 7-1992J.

MISCELLANEOUS

Special Offering: New 8″ and 6″ drilling bits approx. 5′ lengths with 2″ x 3″ — 7 API pins, manufactured by Star Drilling Machine Co., shipped prepaid. For Quotations write Degen Pipe & Supply Co., 4900 Sapulpa Rd., Tulsa, Okla.

Amazing bargains in good used-reconditioned cable drilling tools, all sizes 4 to 16″, many used fishing tools half price or less, send list of needs, everything for water, oil, gas wells, new and used well casing, special prices on 7 and 8 inch drive pipe; J & L plastic kore drilling lines. Tri State Tool Co. (largest in the east) Box 827, Parkersburg, W.Va.

Bucyrus-Erie 22-T blast hole drill; purchased new 1952; 34′ 6″ one-piece derrick; gasoline engine driven with electric starter; 22-W bull reel; perfect condition.

Loomis clipper #44 crawler mounted, gasoline engine driven; both machines immediately available. Kermit Snyder, Deer Lake, Pine Blvd., Orwigsburg, Pa., Phone: Orwigsburg 6-8221.

New pipe casing in stock: 3″, 4″, 6″, 8″, 10″, 12″. Reconditioned pipe casing in stock: 3″, 4″, 4½″, 5″, 6″, 8″, 10″, 12″. Cutting and threading facilities; attractive prices on request. H. Schwartz & Sons, 2235 North Bodine St., Phila., Pa., Garfield 6-6464.

Army surplus 1¼″ roller chain $2.00 foot; set of eight matched V-belts B210 $35; tool wrenches bar and chain ½ price; 10KW 110/220 generator; low voltage control, automatic transfer switch, Willys engine driven $500; two 10″ bits 4½x5½ joint 10c a lb. J. B. Reed, R.R. 1, Fredericktown, Ohio.

Slightly used 500 GPM, 120 lbs. pressure, 10″, Fairbanks Morse 8 stage, 60′ setting deep well turbine pump with 40 hp 3 phase, 440 volt electric motor, (still in original crate). Hamilton Mfg. & Supply Co., Box 212, Holland, Michigan, Phone: 6-6536.

MISCELLANEOUS

160 acres producing oil lease at 550 ft. level, core shows around 8000 bbls. of oil in place per acre, will trade for 24-L or will consider partner to develop; location Eastern Kansas, Carl Allen, 5107 Meredith Dr., Des Moines, Iowa.

New and used pipe and casing 2" to 8"; used well drills, write for new price list. Thomas H. Scheuren, 933 Fern Ave., Reading, Pa., Phone: 41287.

1943 Loomis blast hole drill mounted on 13' cats equipped with 33' derrick and Continental engine; various tools also included; excellent condition, price: $1500. John Sharamanda, North Lions St., Lansdale, Pa.

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Long established company in Southeastern Michigan needs man experienced in deep well turbines and water systems; excellent salary for right man; state age, experience and qualifications.
Box 606

Wanted: Sober cable tool operator between 25 and 35 years of age experienced in shallow and deep well drilling; strainer setting experience desirable. Henry Boysen Co., R. R. 1. Libertyville, Ill., Phone: 2-2559.

Drill Operator: Experienced on large work or capable of handling small screen wells; steady work. Douglas B. Holzem, 1975 Prairie Ave., Beloit, Wis.

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One-half interest in drilling business with two mounted drills; one portable; fishing, drilling and pump equipment. F. B. Null, 1348 Jackson St., Rockford, Ill.

Well established drilling, pump and irrigation business; modern building on one acre of land, located on main highway in fast growing farm area; two 24-L Bucyrus-Erie, one 71 Star all with tools; three pump pulling rigs, trucks, pickups, four arc welders trailer mounted, test pumps and compressors and shop equipment all in first class working order. J. D. Hamilton, P. O. Box 438, Chula Vista, Calif.

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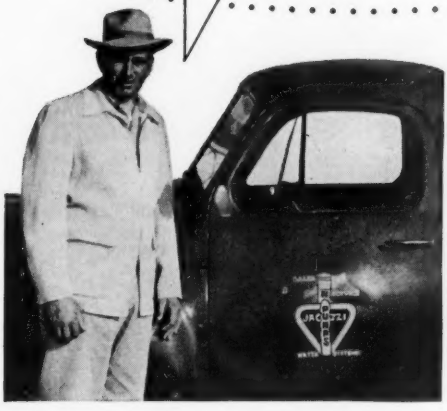
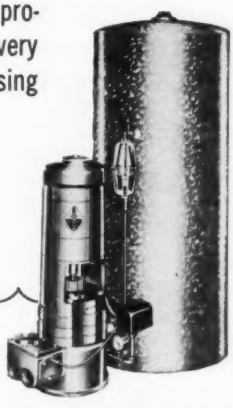


says Joseph A. Schwall of Northbrook, Illinois —one of northern Illinois' most successful and respected water well drillers.

"Whenever I drill a well, I tell my customer to install nothing but a Jacuzzi Deeprime Jet. I want my customers to be happy. Some pumps will burn out if the water level drops too low. They go out quick, too, if there's sand in the water. Other jet pumps lose prime. But, every Jacuzzi Deeprime Jet owner is happy as a lark. That's why I tell 'em to install a pump that won't ever lose prime—and every working part is right on top of the ground, not 'way down in the well. If the well is a weak producer, the Deeprime Jet adjusts itself and gets every drop of water the well can produce without losing prime or any danger of burning up the pump."



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Even while demonstrating, the crew operating a Bucyrus-Erie 1-W water well drill settled for nothing less than the real thing. Sending the machine through its paces at the Ontario (Canada) Water Well Association Convention, they hit a water bearing formation and brought in a well. The Reda Pump Co., also exhibiting its wares, supplied a pump, and the well produced an estimated 20 gpm. While the 1-W is capable of drilling by the jetting, hollow rod, rotary and cable tool methods, the men, in going down on this sequence, used 4-in. cable tools. They cut through some fairly hard lime before hitting water bearing sand at 42 feet.

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The monthly magazine for water well drillers

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